CLAIMS:

1. A method for loading and executing applications securely, comprising:

transitioning an attached processor complex (APC) to an isolated state;

loading a load image into the isolated APC;

authenticating the load image in the isolated APC;

executing the load image if the load image successfully authenticates;

clearing the load image; and

returning a processor of the APC to a cleared non-isolated state upon completion of the execution of the load image.

2. The method of Claim 1, further comprising decrypting at least a section of the loaded image.

3. The method of Claim 1, further comprising stopping a processor of the APC in an isolated state if authentication of the load image fails and signaling authentication failure to the MPU.

4. The method of Claim 1, further comprising providing isolation by partitioning a local memory into a general communication region and a region accessible only by the APU.

5. The method of Claim 4, further comprising providing isolation by disabling pervasive and or debug interfaces on the APU.

6. A system for authenticating code or data within a dynamically allocated partition in a local store, comprising:

the local store, wherein the local store is partitioned into an isolated and non-isolated region;

a load and exit state machine employable to load the code or data to the isolated region of the local store, the load and exit state machine further employable to authenticate contents of the local store; and

an attached processor (APU) coupled to the local store, the APU configured to execute the authenticated code in the local store.

7. The system of Claim 6, wherein the APU is isolated.

8. The system of Claim 1, wherein the APU is further configured to issue a local store de-isolate command.

9. The system of Claim 5, wherein the APU is further configured to issue an erase command for the isolated partition.

10. The system of Claim 6, further comprising a main processor unit (MPU) indirectly coupled to the local store.

11. The system of Claim 6, wherein the APU is configured to deny the MPU access to indicia within the isolated region of the local store.

12. A method for dynamically partitioning and un-partitioning a local store for the authentication of code or data, comprising:

partitioning the local store into an isolated and non-isolated section;

loading code or data into the isolated section; and

authenticating the code or data into the isolated section of the local store.

13. The method of Claim 12, wherein the partitioning of the local store is initiated by a load command.

14. The method of Claim 13, wherein the load command is issued by a main processor unit (MPU).

15. The method of Claim 8, further comprising executing authenticated code or data in the isolated section of the local store.

16. The method of Claim 15, further comprising erasing code or data in the isolated section of the local store after executing the authenticated code.

17. The method of Claim 16, further comprising de-partitioning the local store into a non-isolated state.

18. The method of Claim 17, wherein the de-partitioning is started through execution of an exit command.

19. The method of Claim 12, further comprising:

using the master key to decrypt at least one encrypted key from the loaded code; and

decrypting additional loaded code or data with the at least one decrypted key.

20. A processor for dynamically partitioning a local store for the authentication of code or data, the processor including a computer program, comprising:

computer code for partitioning an attached processor unit (APU) into an isolated and non-isolated section;

computer code for loading code or data into the isolated section; and

computer code for authenticating code or data into the isolated section.

21. A computer program product for dynamically partitioning a local store for the authentication of code or data in a computer system, the computer program product having a medium with a computer program embodied thereon, the computer program comprising:

computer code for partitioning an attached processor unit (APU) into an isolated and non-isolated section;

computer code for loading code into the isolated section; and

computer code for authenticating code in the isolated section.